



Non Mulesing Network

Newsletter of the Department of Agriculture and Food

Contents

Independent culling levels and indicator traits for blowfly strike - page 2

Managing breech strike in unmulesed sheep in 2008 - page 3

The Murrayfield story - page 4

Tail length issues - page 4

Cost of chemical application at marking - page 4

Contacts for this issue:

Dr Johan Greef, DAFWA South Perth,
johan.greeff@agric.wa.gov.au

Dr John Karlsson, DAFWA Katanning,
john.karlsson@agric.wa.gov.au

Darren Michael, DAFWA Albany,
darren.michael@agric.wa.gov.au

Julia Smith, DAFWA Albany,
julia.smith@agric.wa.gov.au

Dr Rob Woodgate, DAFWA Albany,
rob.woodgate@agric.wa.gov.au

For further information contact:

www.agric.wa.gov.au/mulesing

Julia Smith
Industry and Rural Services
Animal Industries Development

Phone: (08) 9892 8454

E: Julia.smith@agric.wa.gov.au

WELCOME

Welcome to the fifth edition of the Department of Agriculture and Food's newsletter on the transition from mulesing and managing breech strike.

Please pass this newsletter on to anyone who is interested and encourage them to register for future editions by emailing Julia Smith (Department of Agriculture and Food, Albany)
julia.smith@agric.wa.gov.au

Have you recently stopped mulesing or are you thinking about it?

If you would like to share your experiences with other sheep producers who are in the same position and learn from other experiences, please email Julia Smith julia.smith@agric.wa.gov.au or phone 08 9892 8450.

In brief!

Tail length issues

There have been recent reports that tail docking at a shorter than recommended length is leading to infection of the tail and subsequent lamb losses.

Recommended tail length is at the 3rd joint, or where the tail reaches the tip of the vulva. Make sure that when tail docking, the tip of the tail (if using a gas knife or rings) is not at a length where it could become contaminated with faeces or urine. For more information on tail length please refer to the fourth edition of the newsletter

Papers from Sheep Updates which focus on the transition from mulesing are now available at www.agric.wa.gov.au/sheepupdates

Important disclaimer

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

Independent culling levels and indicator traits for blowfly strike

Johan Greeff, South Perth and John Karlsson, Katanning

Research to date has shown that the important indicator traits for breech strike resistance/susceptibility are:

- Wrinkles;
- wet dags (especially in the winter rainfall regions of southern Australia);
- breech cover;
- yellow wool; and
- urine stain

The relative importance of these indicator traits will vary in different seasons and between properties. When selecting animals for these traits, there are two main issues to consider. The selection cannot be done for each of the traits at the same time and the proportion to be culled for each trait needs to be estimated in advance, based on how many replacement ewes are needed.

The problem is how to determine how many animals should be culled on each indicator trait at each stage of the selection process. A solution is to follow an independent culling level approach. This means that animals above a specific value are culled at the time of measurement, independently from measurement of the other traits.

Using this method requires knowledge of a flock's fertility and some experience with trait expression in a flock. The breeding objectives set for a flock will also influence the number and proportion of animals to be culled for each trait.

An example: If ~65% of ewes need to be retained to maintain flock size and there are 1000 older ewes and 400 ewe hoggets, producers will need to retain 250 ewe replacements (as shown in the diagram below). This means 150 hogget ewes can be culled. Assuming that 50 older ewes and 50 maidens will be culled for other traits such

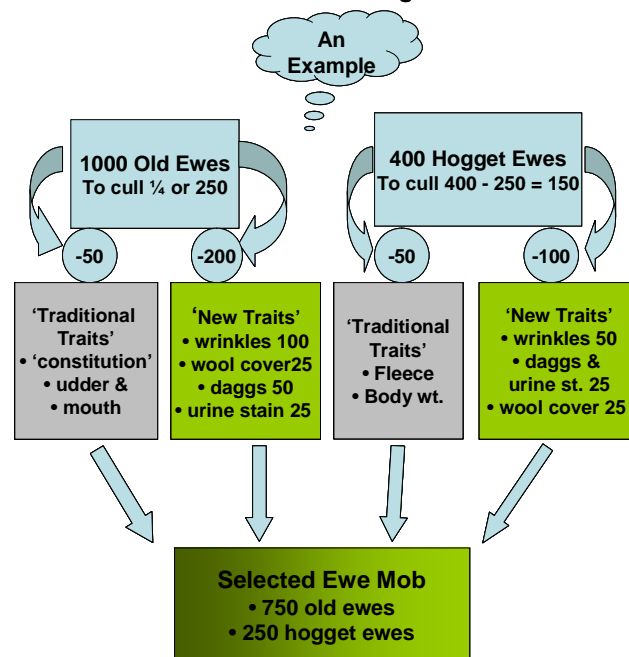
as udders, mouths, wool etc, it leaves 200 older ewes and 100 maiden ewes that can be culled on the new traits such as wrinkles and dags.

Decide how much emphasis to place on each trait i.e. how many animals should be culled on each trait so that 65% is selected in the final stage. To determine the proportion available to be culled on each trait, the equation below can be used where a = proportion culled on trait one, b = proportion culled on trait two, c = proportion culled on trait three, etc.

Proportion selected = $[(1-a)*(1-b)*(1-c)...]$

A possible option is to cull 20% on wrinkles, 10% on dags and 10% on breech cover. This would result in

Independent Culling Levels Selecting for Breech Strike Resistance in non-pedigreed flocks & winter rainfall regions



$$[(1-0.2 \text{ for wrinkles}) * (1-0.1 \text{ for dags}) * (1-0.1 \text{ for breech cover})] = 0.65$$

The same result will be obtained if 20% is culled for breech cover and 10% for wrinkles and dags. Alternatively cull 15% on each trait which will result in about 0.62. Many other options can be followed.

The big benefit of this approach is because culling information becomes available at different times. Wrinkles may be scored at marking, while

breech cover is scored at weaning and dags at yearling age. Using this approach allows culling at each stage so that the more susceptible animals are removed from the flock at the earliest convenience without the threat that not enough animals are available at hogget age after shearing. Even if there is an over expression of one trait at a particular stage, then following this approach will prevent over culling too many animals for any particular trait.

Managing breech strike in unmulesed sheep in 2008

Last year, the department monitored the 2008-drop of unmulesed lambs running on Badgingarra, Wongan Hills, Avondale, GSARI (Katanning) and Mount Barker Research Support Unit (RSU). This was aimed at assessing risk factors for breech blowfly strike to assist with the development of sound, practical advice to allow producers to effectively manage flystrike in sheep.

Shearing and crutching times are critical in determining appropriate chemical choices for strategic protection against blowfly strike, so each RSU management plan was reviewed.

A detailed record of every flystrike detected in unmulesed sheep on each RSU included the individual details of the struck animal and the site and size of the strike.

Breech flystrike, in the monitored unmulesed 2008 lambs ranged from 3.5 to 11.4 per cent. These lambs, apart from 100 at Mt Barker, had no marking application of chemical and were only treated when a significant proportion of the mob had been affected by strike.

Breech wrinkle score distributions for measured mobs were measured and the ranges can be seen in the graph below. There was an increased prevalence of breech strike in animals with breech wrinkle scores of 4 or 5 when compared with animals in the same mobs with breech wrinkle scores of 3 or less.

Dag score measurements in the 2008-drop unmulesed lambs varied considerably between the different RSUs. Lambs at Avondale appeared to be affected more by sheep worms than those at other RSUs, presumably due to excessive worm contamination of paddocks by the ewes during winter and spring 2008.

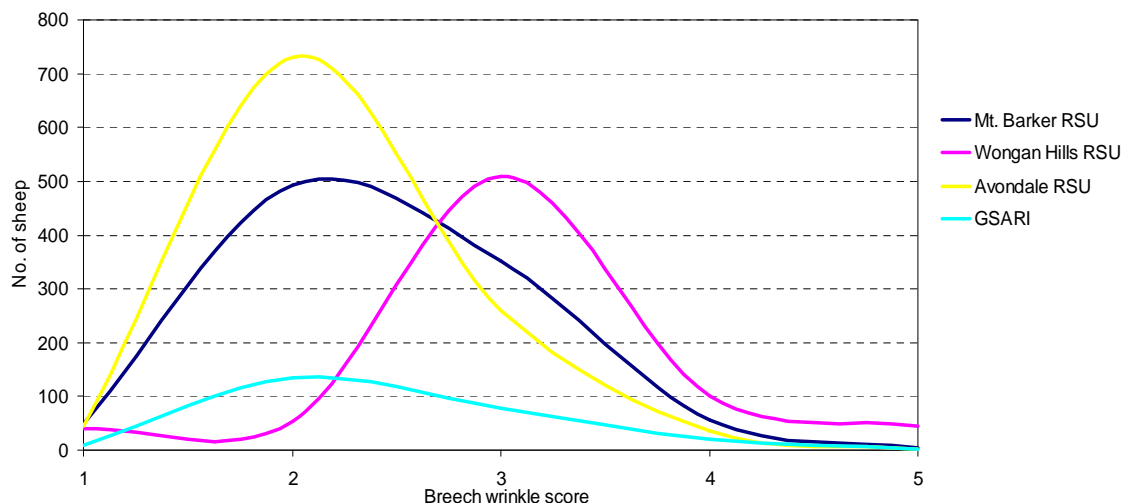
At Avondale, lambs with dag score 2, 3 and 4 were twice, four and seven times (respectively) more likely to get struck compared to dag score 1 lambs.

This data highlights two key issues:

1. The importance of effective worm control and avoidance of dags in unmulesed sheep to reduce the risk of breech strike.
2. The importance of significant wrinkling in the breech area as a risk factor for breech blowfly strike.

It is vital when planning the transition away from surgical mulesing to consider timing of shearing and crutching and have an understanding of the purpose, protective periods and wool and meat withholding periods and export slaughter intervals of the different flystrike products. A clear sheep monitoring plan is also important to prevent major problems when considering the transition away from mulesing.

[To read further on this issue please click here.](#)



Un-mulesed wool attracts a premium - Murrayfield

Tasmanian merino producer Bruce Michael demonstrated at the recent Sheep Updates that it is possible to cease mulesing without suffering undue penalties or extra breech strike. Mr Michael manages Murrayfield, a 4100 ha property located on Bruny Island which ceased mulesing after 2004. This decision was based on the fact that the property was situated in a rapidly growing tourist area and nearly all the paddocks were in tourist view.

Ceasing mulesing has not cost Murrayfield financially; instead Mr Michael feels they have become better managers and as a result better production is achieved. A recent sale of un-mulesed wool from Murrayfields, which was part of a 50 tonne non-mulesed

consignment, attracted on average a 7.3 per cent premium.

Key aspects of their management include keeping a close eye on dags, wool colour and assessing breech wrinkle. Worm egg counts play a vital role in managing dags on Murrayfield.

The day to day management of un-mulesed sheep on Murrayfield is no different than that of mulesed sheep. The only considerable management practice that has changed is that the hoggets receive an extra crutching in the spring.

[To read more on Murrayfield, please click here.](#)

Cost of chemical application at marking

Applying a chemical application to the breech of lambs at marking indicates that a chemical treatment at marking may be beneficial in reducing breech strike incidence. A small trial at Mt Barker RSU consisted of 88 ewes and 88 wethers untreated, whilst 100 ewes and 91 wethers received 4ml *Clik* to breech and 4ml *Clik* to purse of ram lambs. Preliminary breech strike results between early September and mid November are shown in the table below.

	No. of breech-struck sheep	No. of non-struck sheep
<i>Clik</i> +	0	182
<i>Clik</i> -	6	161

Lambs at Avondale RSU were treated with *Extinosad* before weaning in 2008 due to high dag scores and some breech strikes. The protection against fly strike appeared to last only 4-7 days after application. *Extinosad* relies on lanolin for binding and retention. Lambs have less lanolin compared to adults so binding is reduced. In addition, the open hairy nature of lamb fleece allows greater exposure to sunlight resulting in quicker chemical breakdown.

It is important when considering a chemical treatment at marking to check wool withholding periods, export slaughter intervals and the length of protection. [Current withholding periods can be found here.](#) The below table summarises two common chemicals which can be used as a preventive.

	Cost/lamb	Protection period (weeks)	Wool WHP (weeks)	ESI (days)
<i>Clik</i> ®	0.30	18-24	12	120
<i>Vetrazin Spray-On</i> ®	0.26	11	8	14

Please help improve Wormboss!

Please take the short WormBoss Survey.
Go to www.wormboss.com.au

Your responses will help continue to provide a world-class sheep worm management advice in the future.